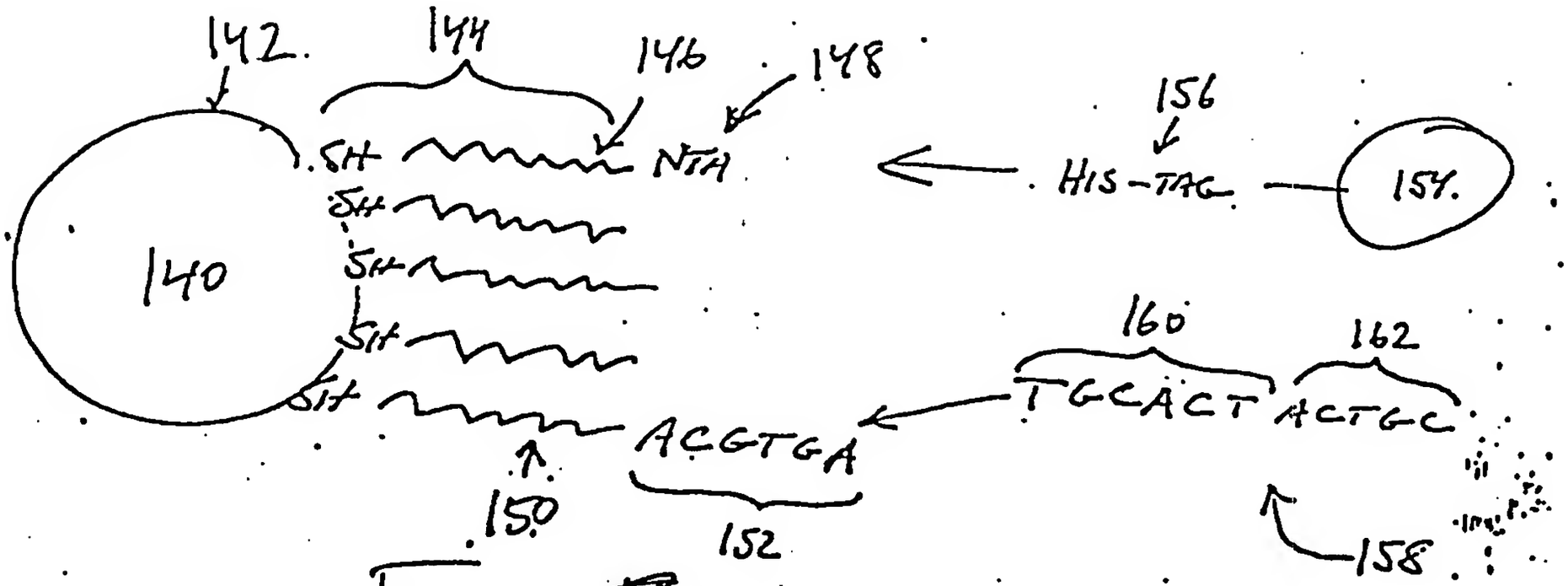

142
144
146
148
156
SH
NH
HIS-TAG
154
140
SH
SH
SH
160
162
TGCACT
ACTGC
ACGTGA
150
152
158

FIG. 1

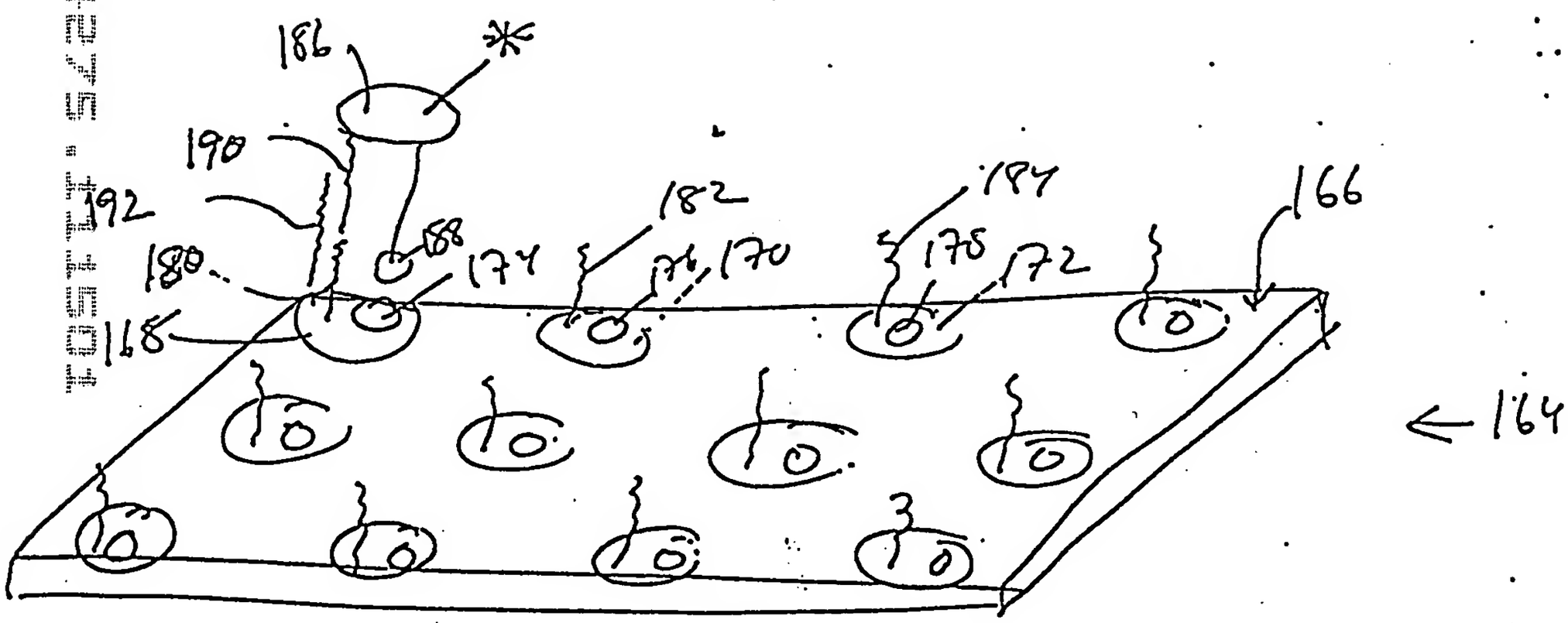


Fig. 4

FIG. 2

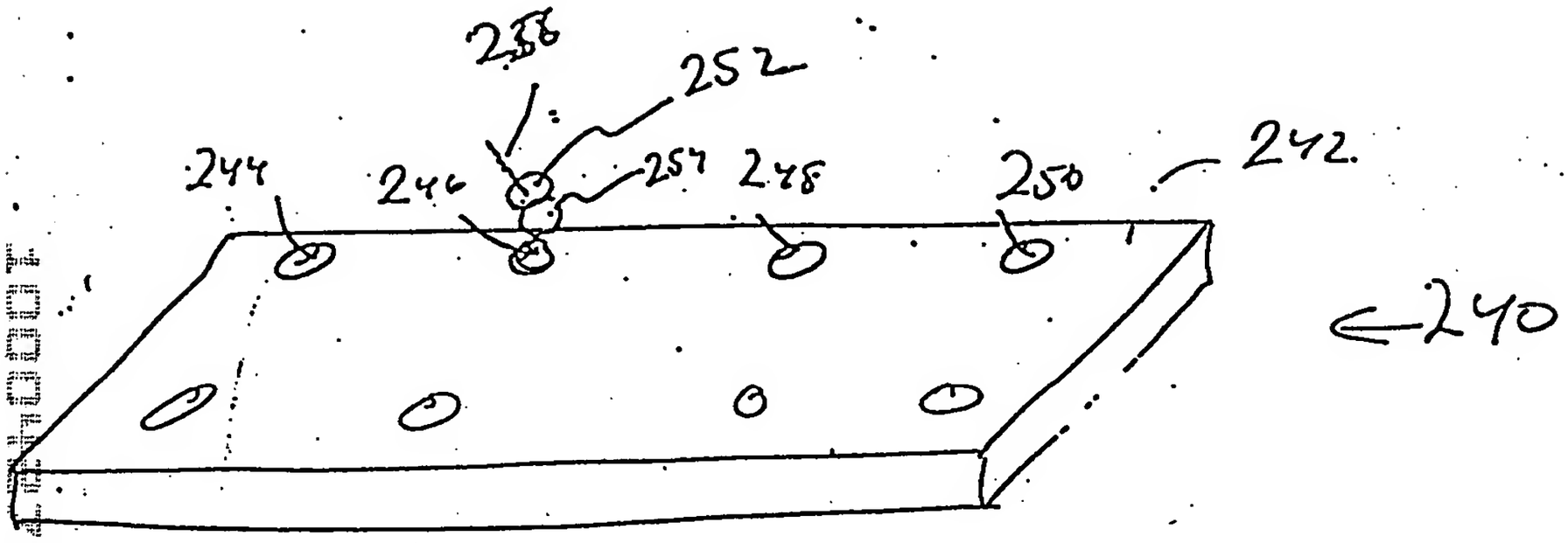


FIG 33

FIG. 3

Add Complementary DNA to "DNA priming region" sequence using standard PCR methods:

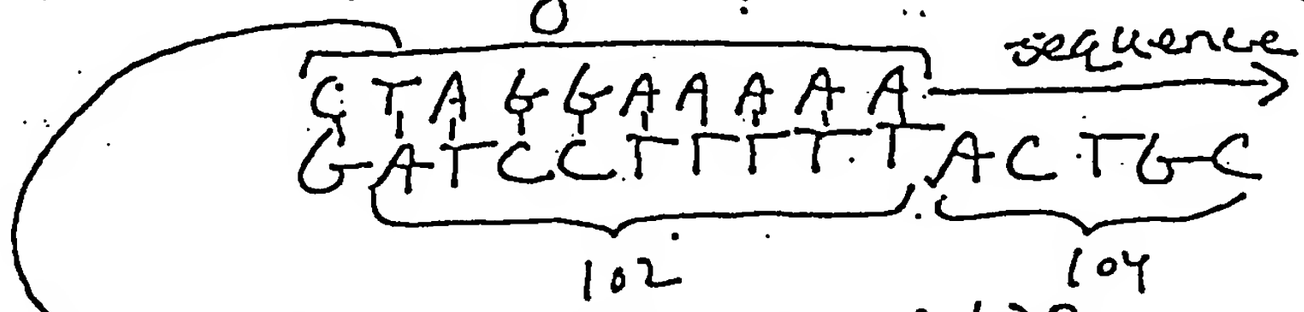


Fig. 38/5

match up resulting sequence data with records kept that connect protein identity to sequence:

ACTGC = protein # 120
(species)

104

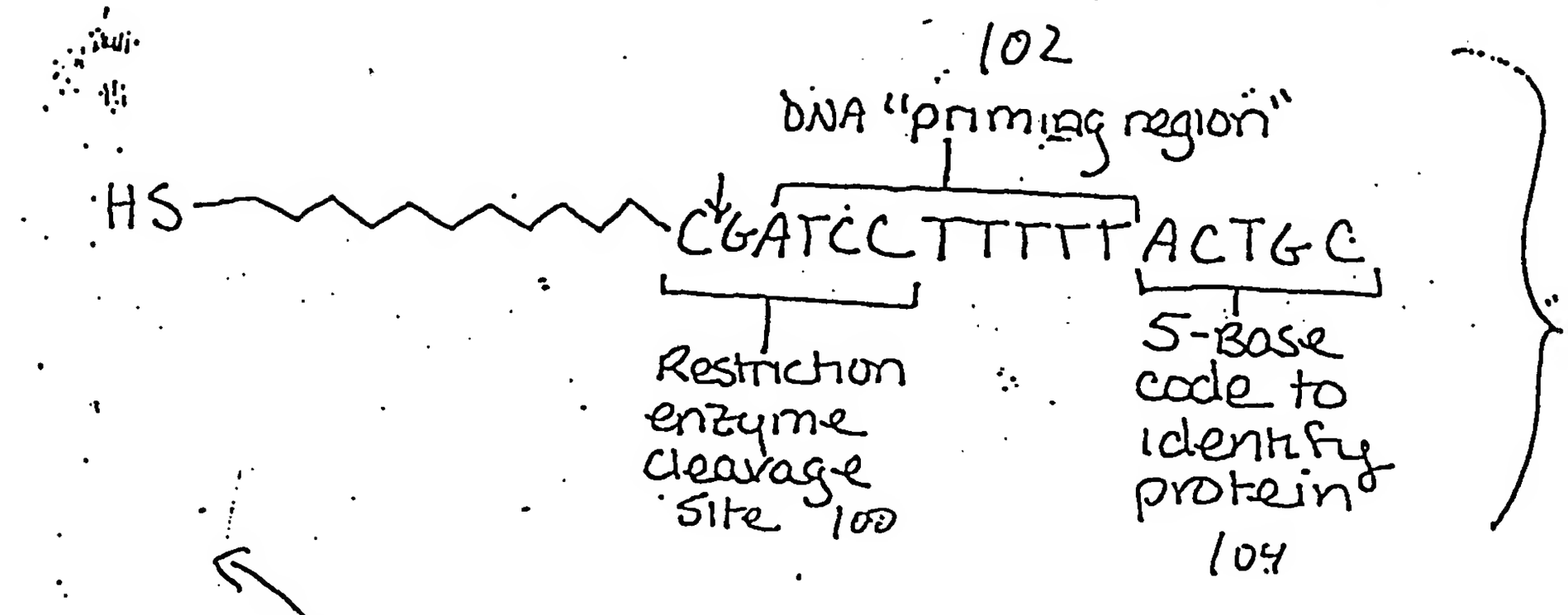


Fig. 4

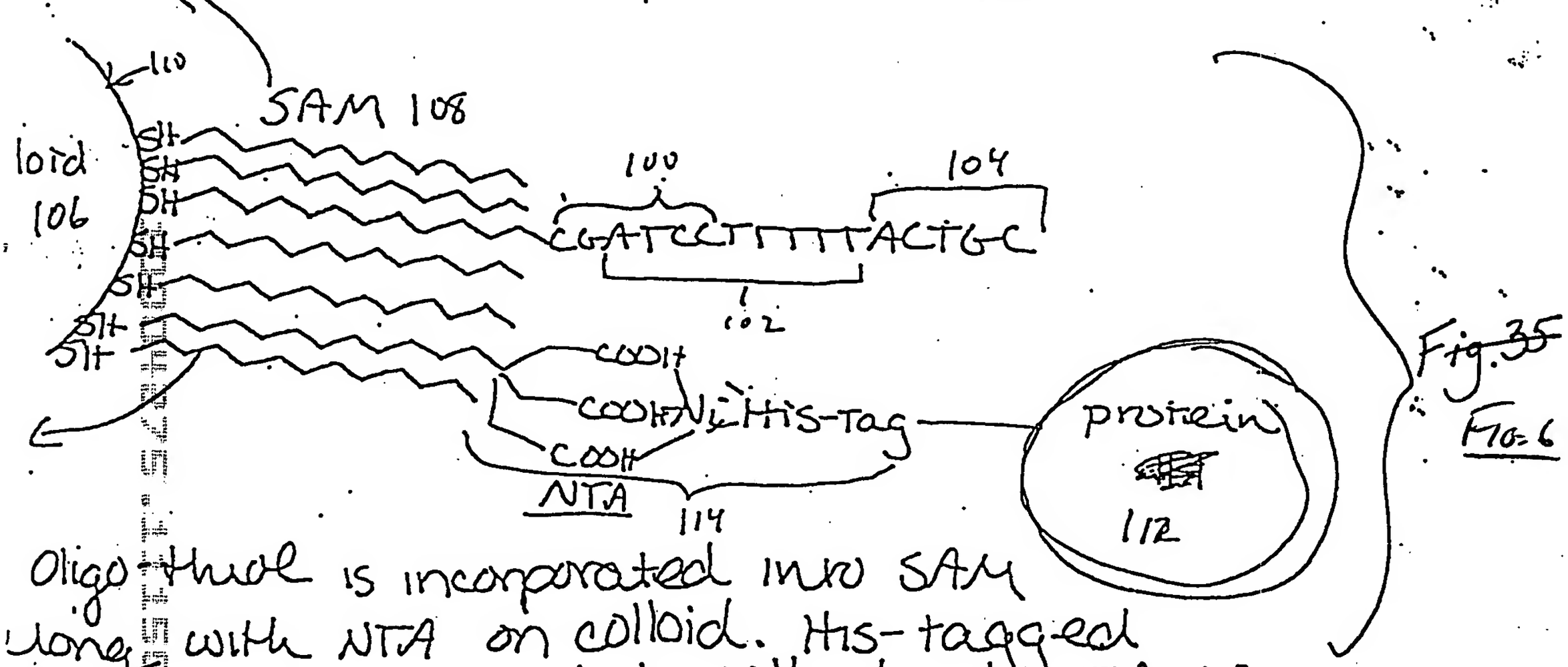
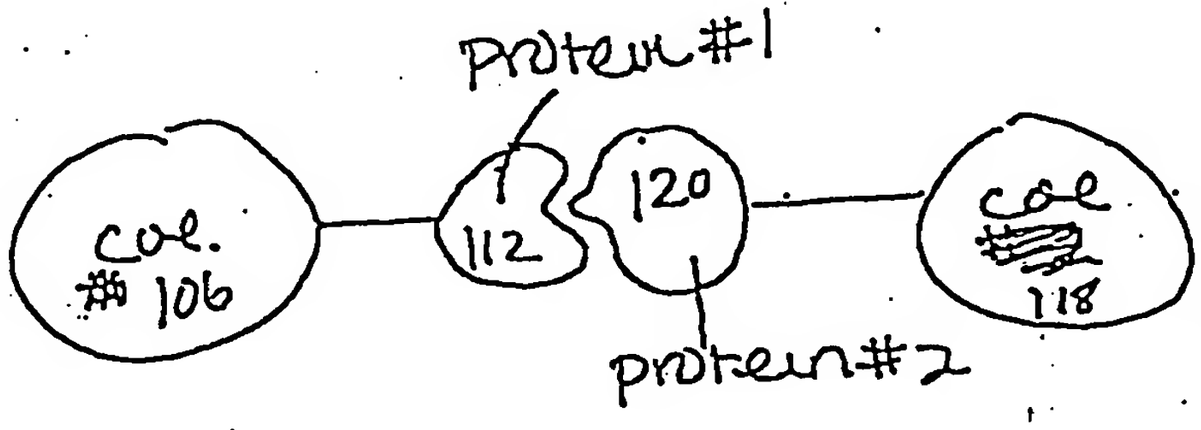


Fig. 5

Fig. 6

Oligonucleotide is incorporated into SAM along with NTA on colloid. His-tagged protein is attached to colloid via NTA-Ni.



protein, bound to colloid is allowed to participate in binding assays.

Fig. 7

To uncover the identity of protein after the assays are completed, cleave the DNA portion of the DNA-Hud by addition of a restriction enzyme:

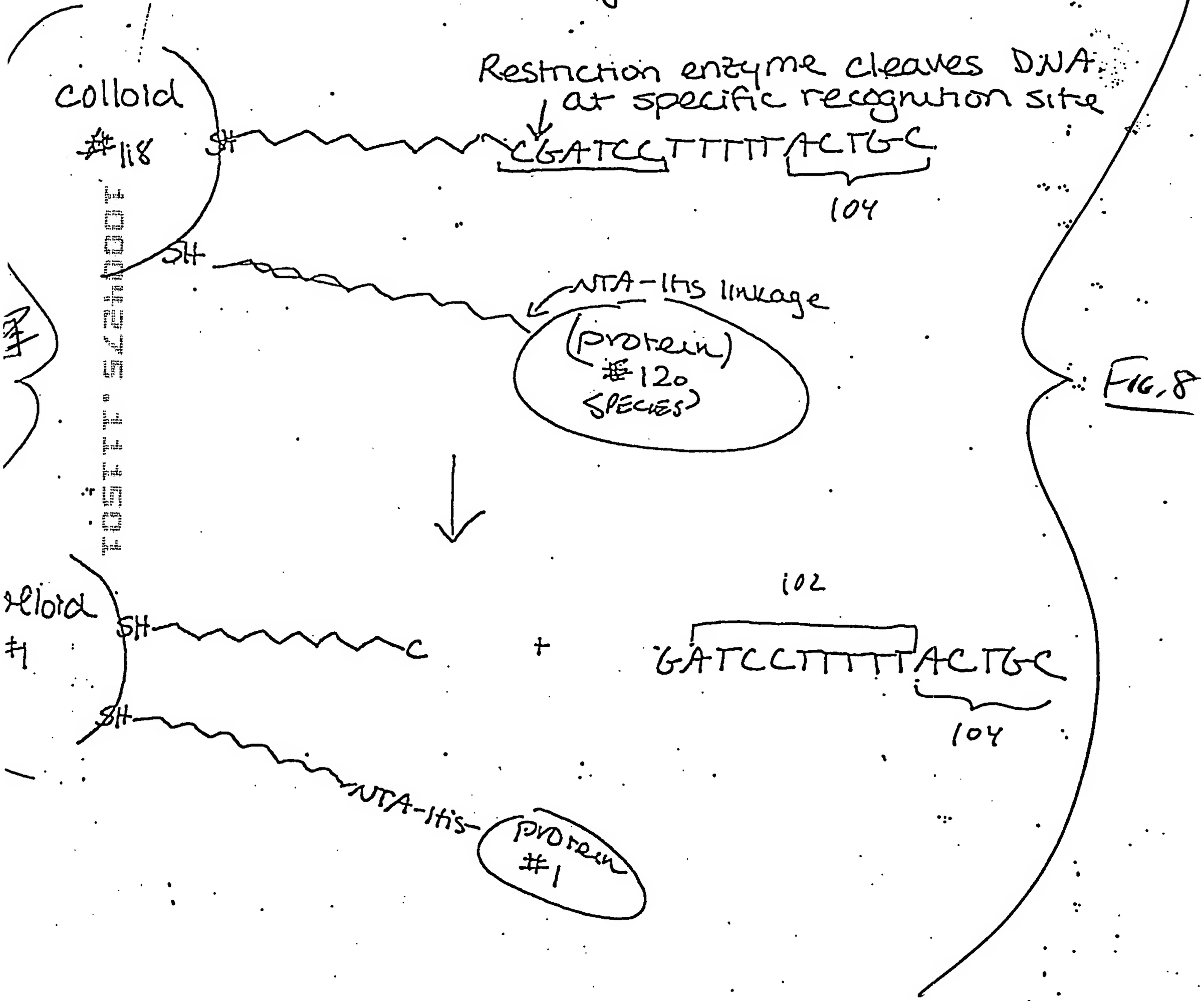


FIG. 8

chemistry #2:

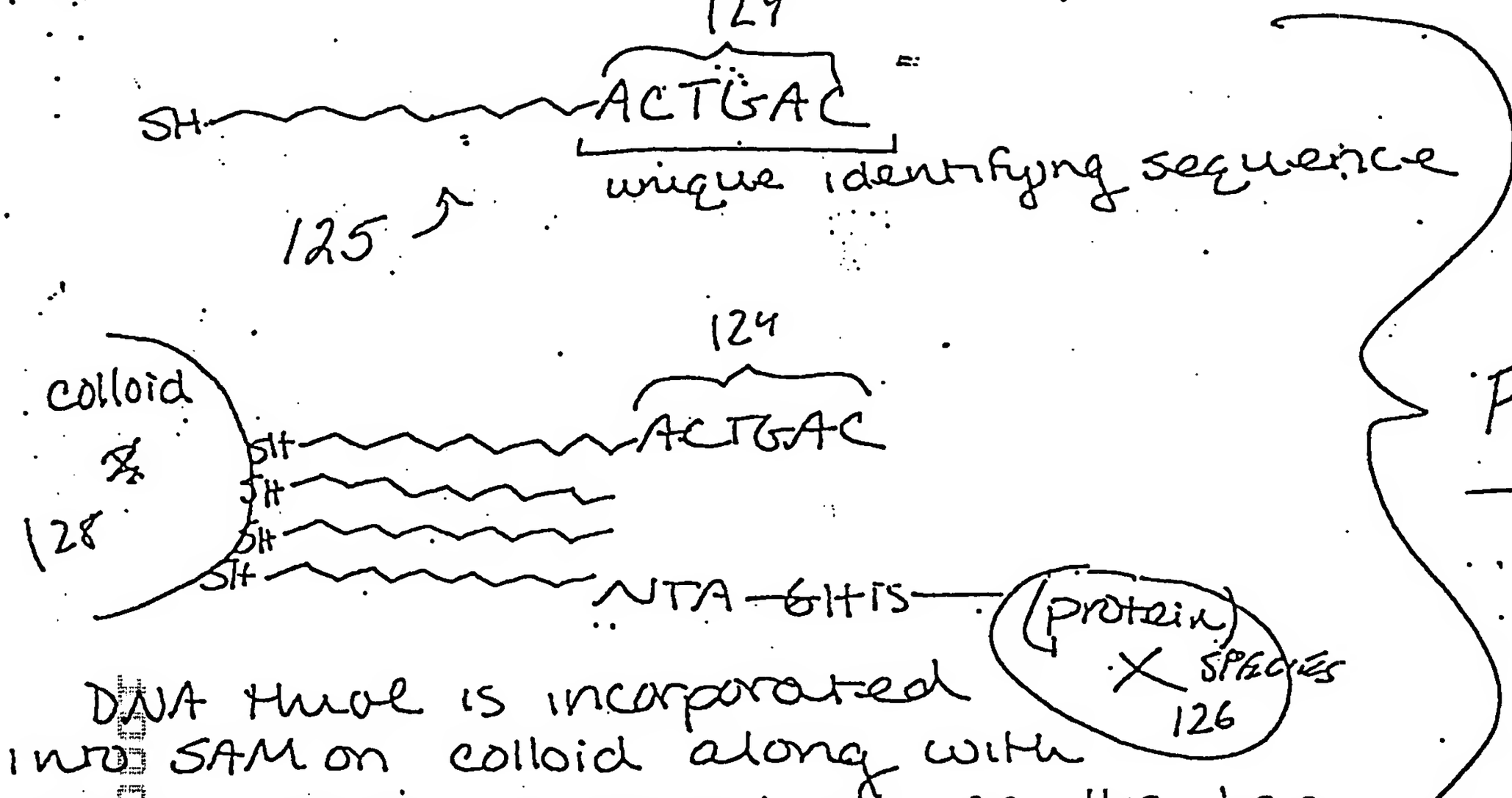


Fig. 9

DNA thiol is incorporated into SAM on colloid along with NTA + protein is attached via his-tag.

colloids bearing proteins or small molecules are allowed to interact. Binding of protein X to small molecule Y brings their DNA tags into close proximity

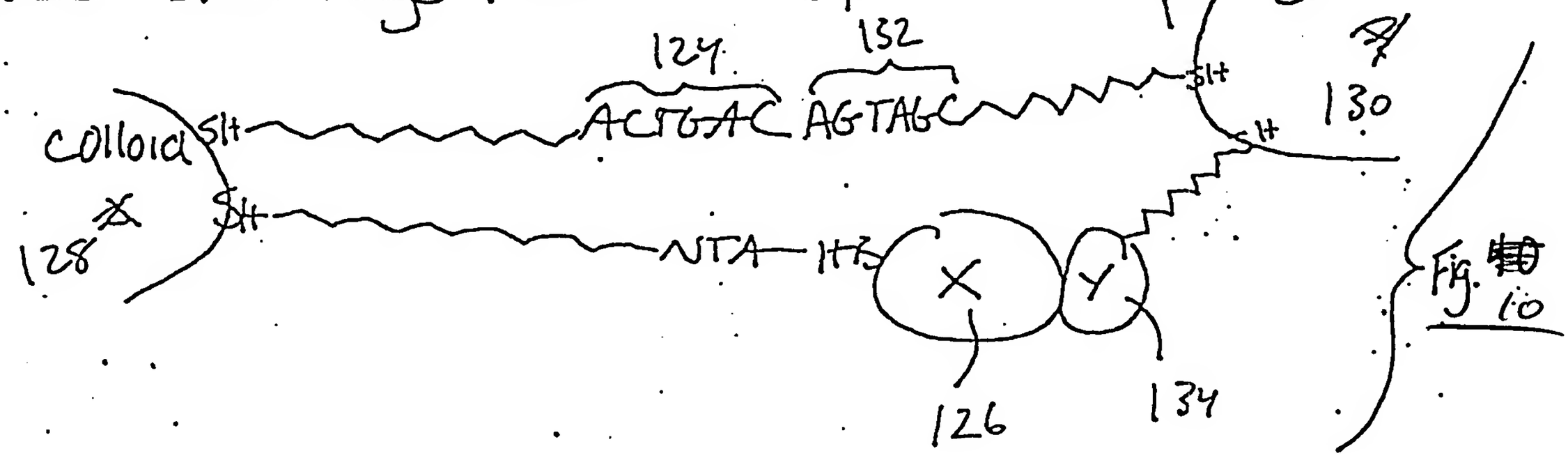


Fig. 10

Complementary sequences to ~~tags~~ oligo identifiers DNA ~~are~~ are added + allowed to bind.

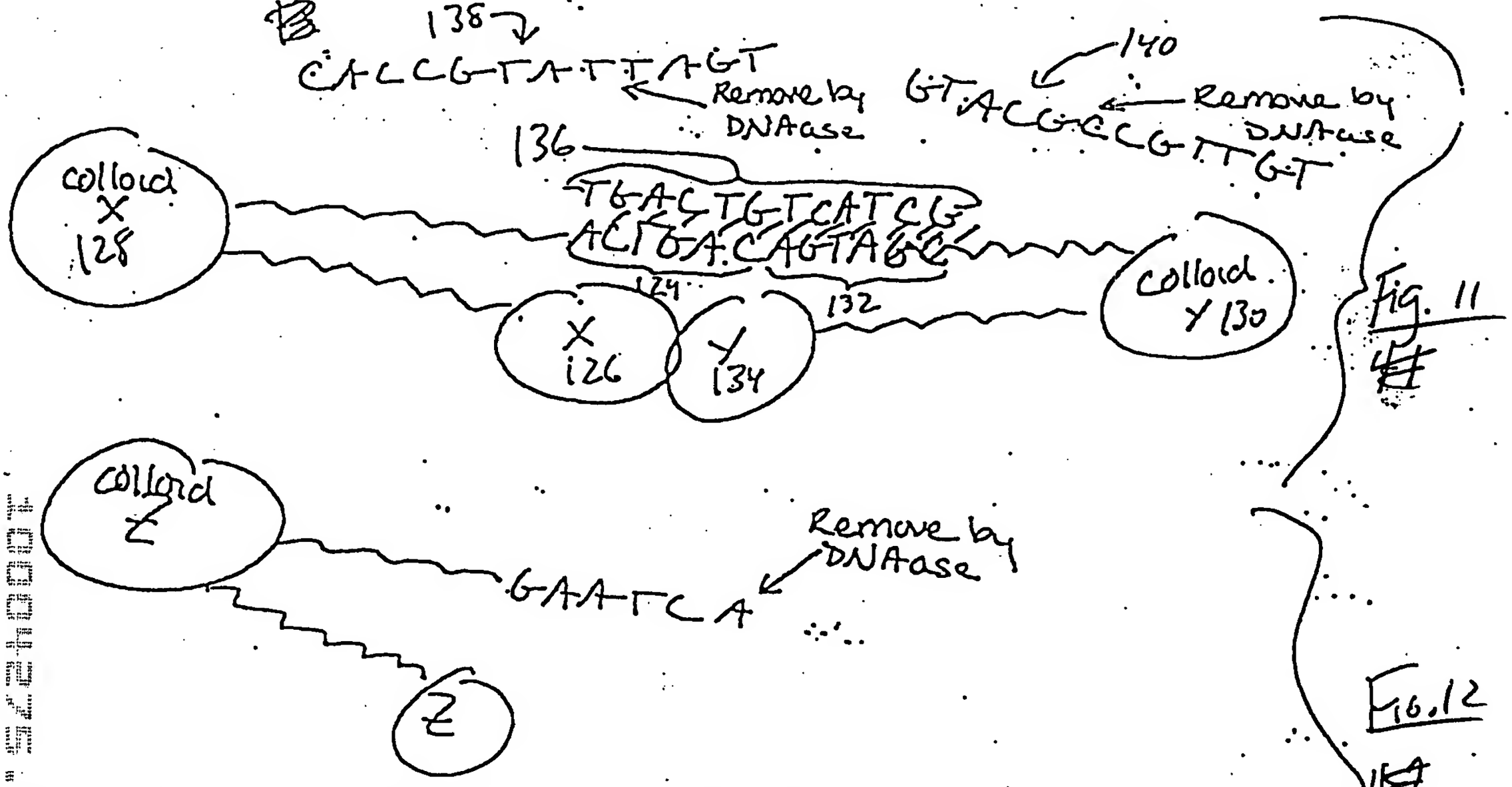


Fig. 11

Fig. 12

Single-stranded DNAase is added to remove (or "chew up" any ~~it~~ non-hybridized DNA.

Result

Fig. 13

). Complementary DNA is denatured and sequenced.

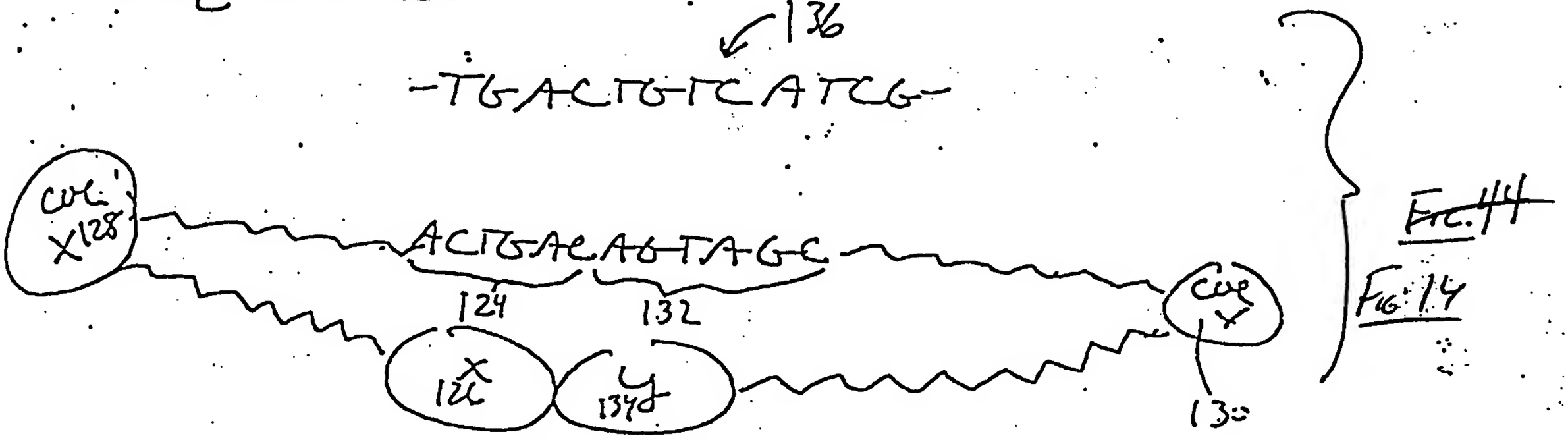
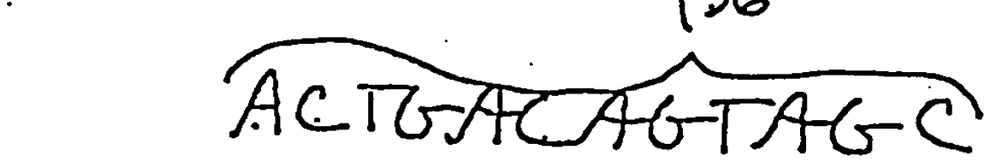
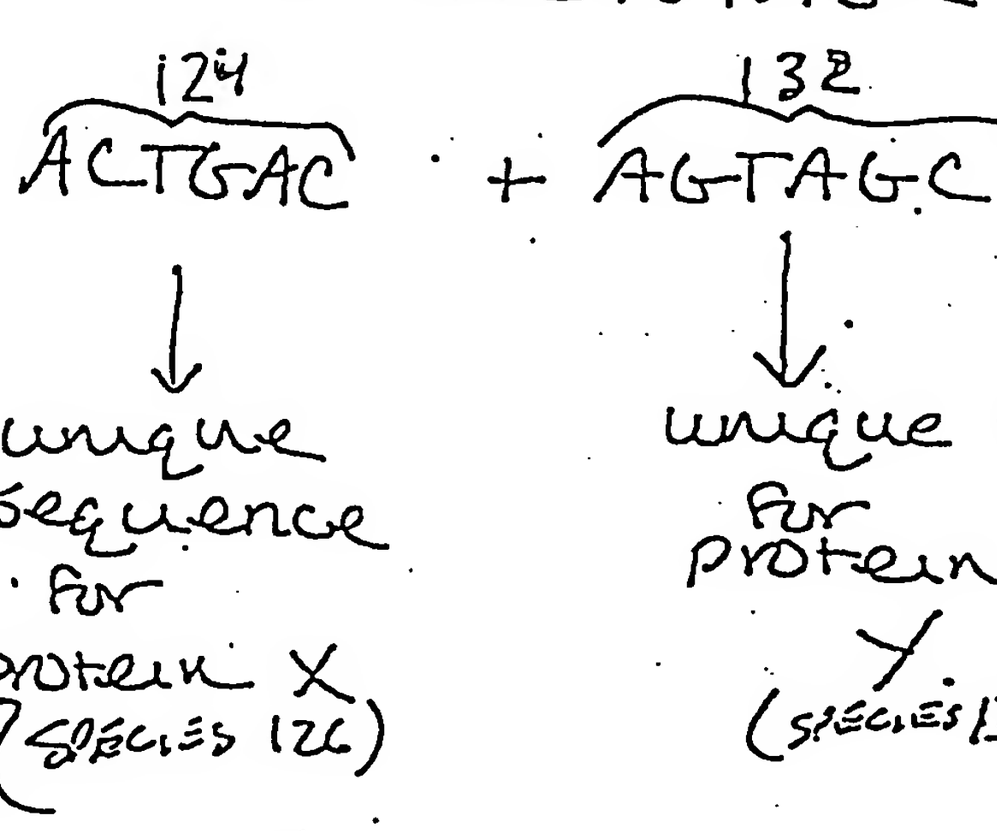


FIG. 14

). Resulting sequence contains the unique DNA codes of the two binding partners, X + Y:





Protein X + Protein Y must be binding partners.

FIG. 15

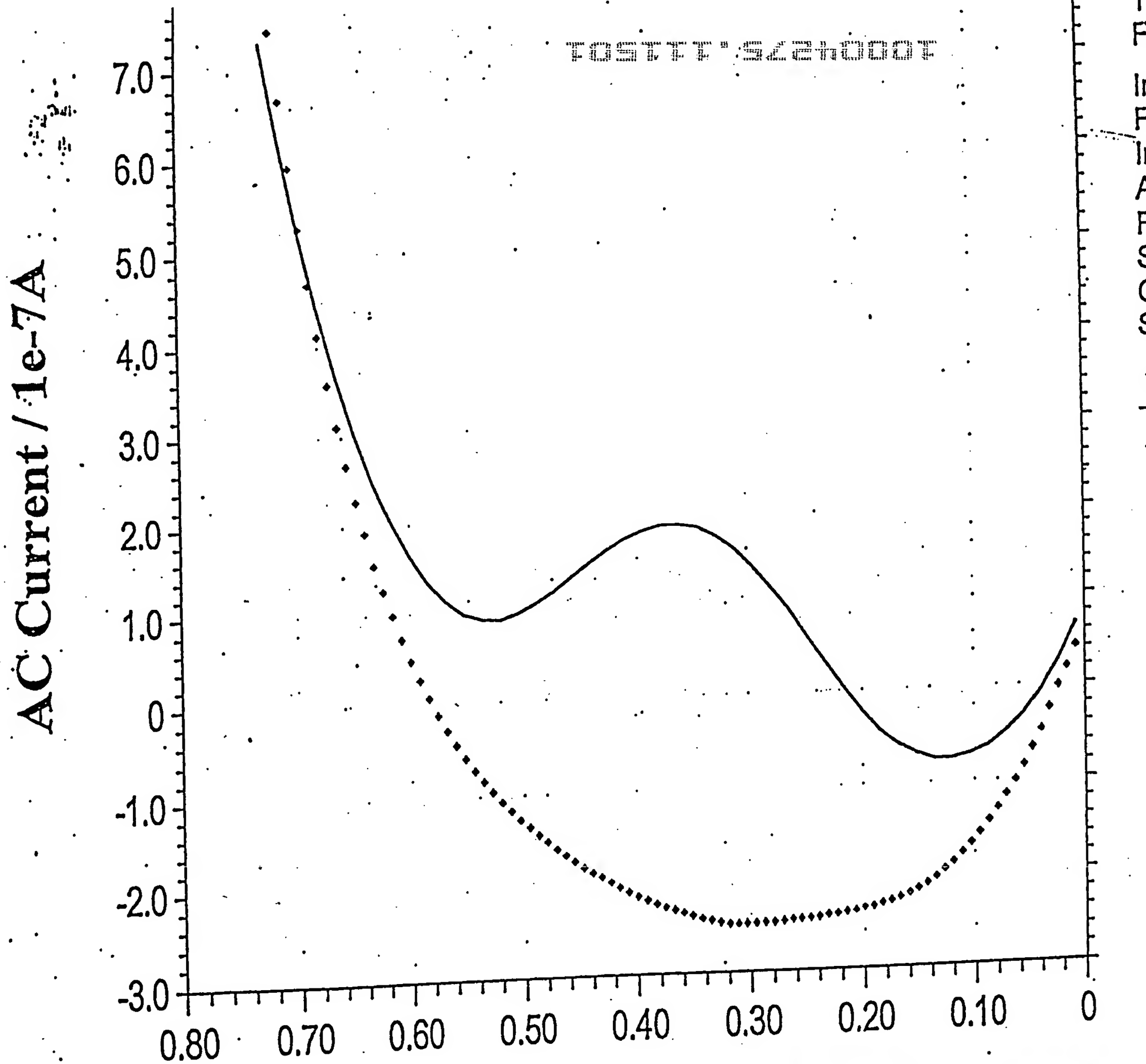

Tech: ACV
File: negconbb.bin
Init E (V) = 0
Final E (V) = 0.8
Incr E (V) = 0.008
Amplitude (V) = 0.025
Frequency (Hz) = 10
Sample Period (s) = 1
Quiet Time (s) = 2
Sensitivity (A/V) = 1e-5
negconbb.bin
posconb.bin
AC Current / 1e-7A
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0
-1.0
-2.0
-3.0
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0
Potential / V

FIG. 16

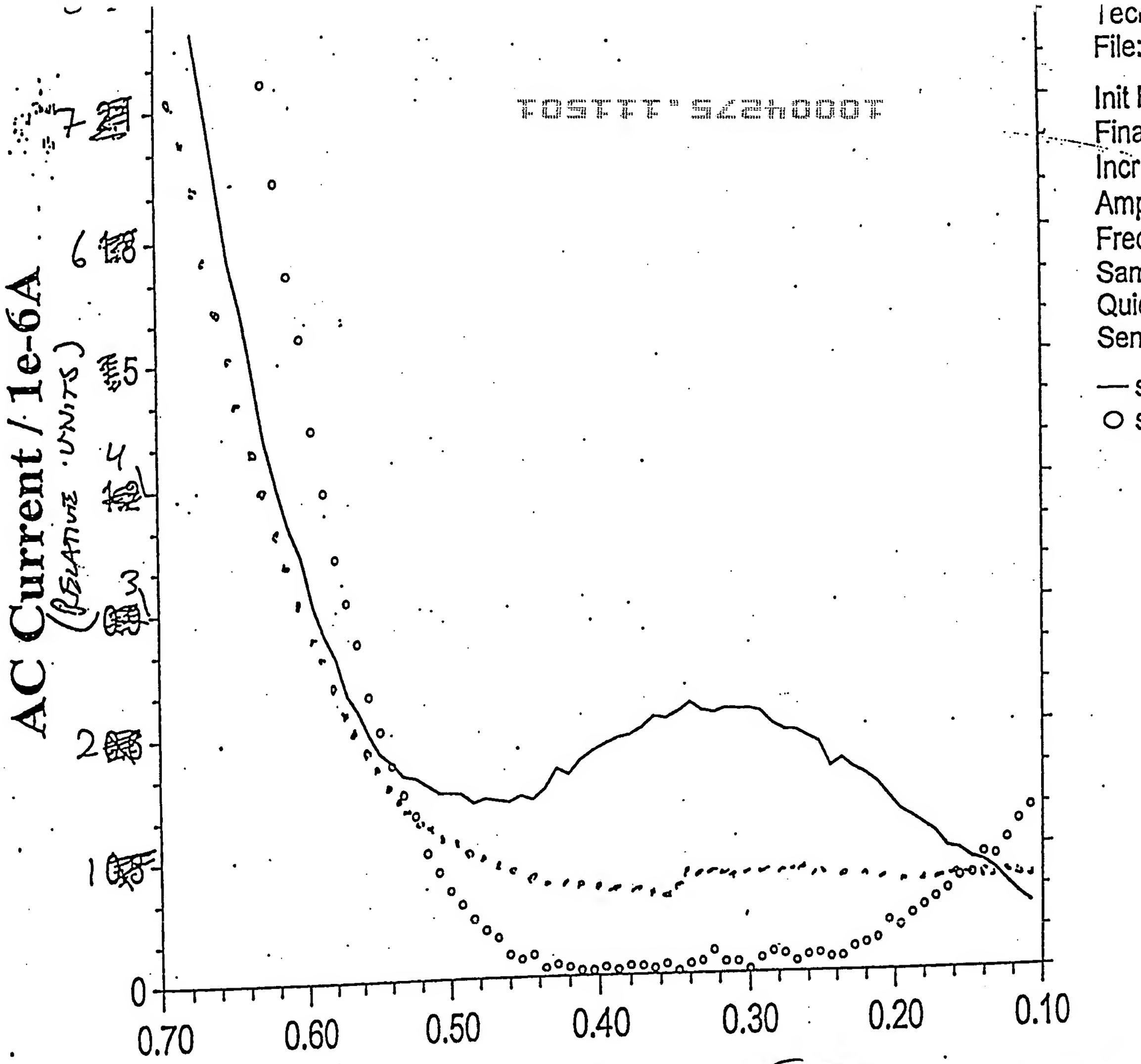
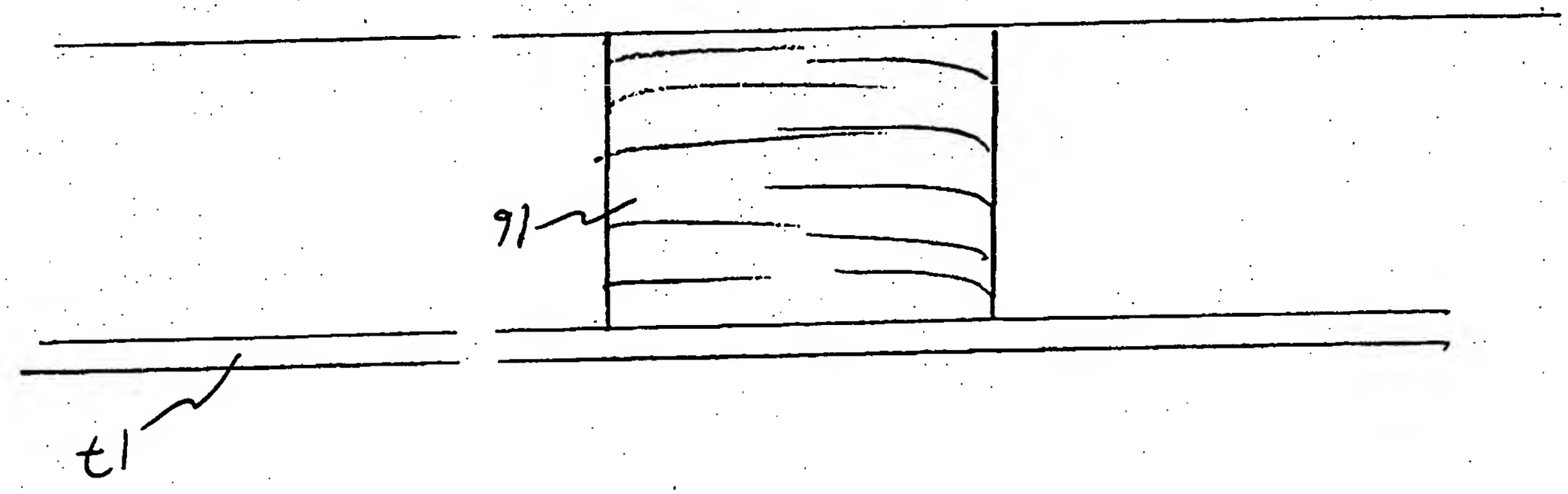
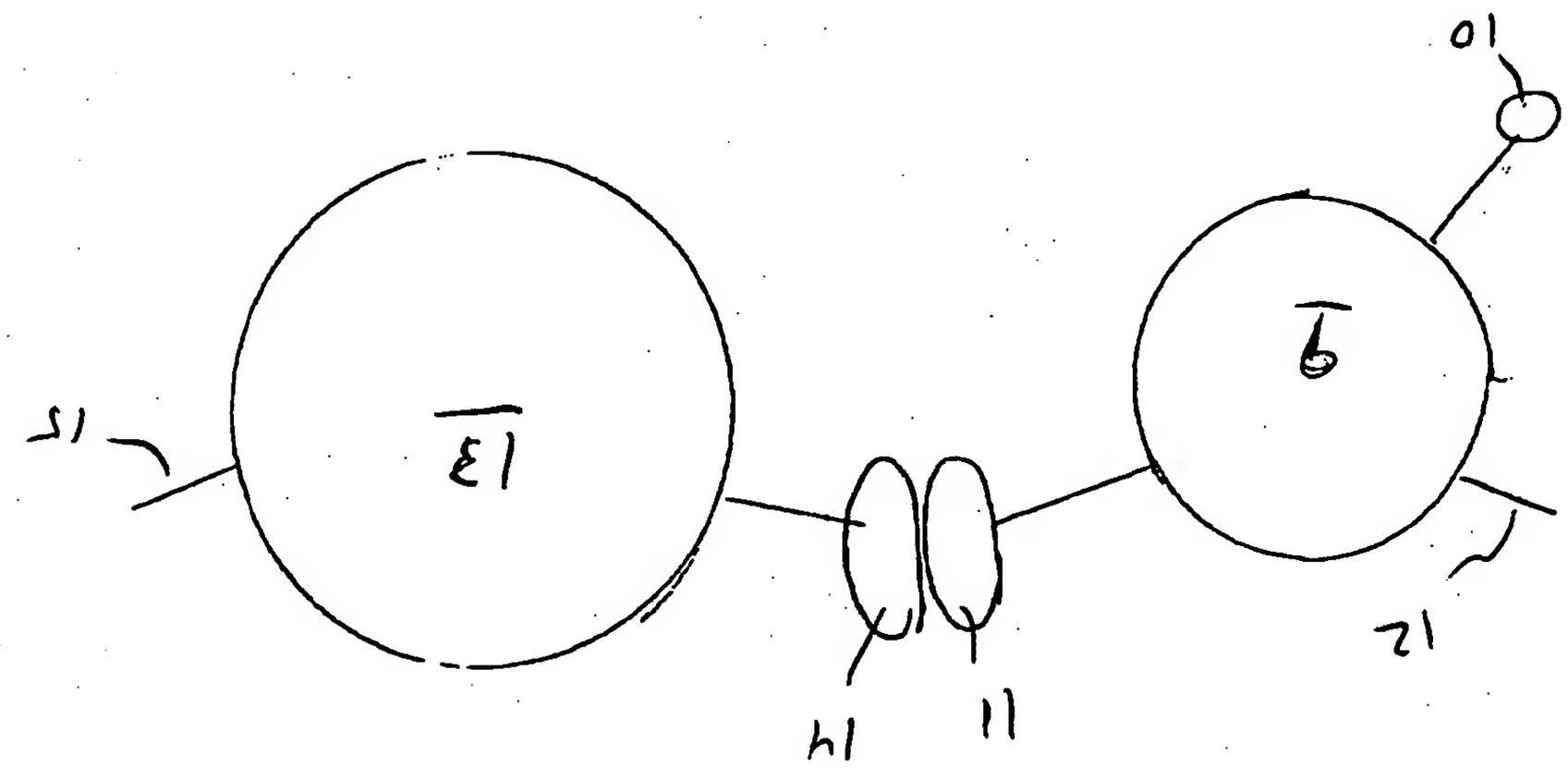
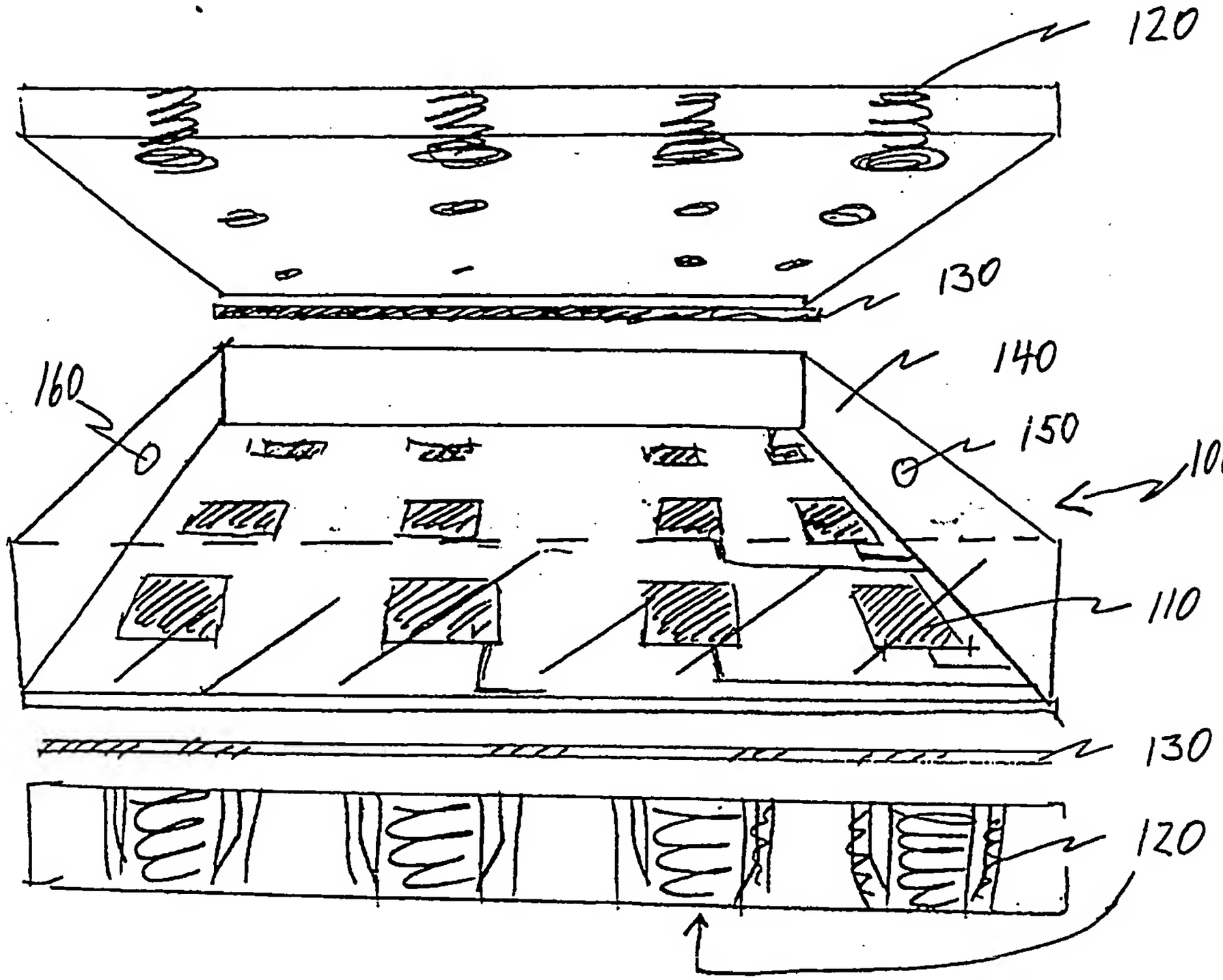

AC Current / 1e-6A
(Relative units)
7
6
5
4
3
2
1
0
0.70
0.60
0.50
0.40
0.30
0.20
0.10
Potential / V
Tech: ACV
File: sb062_007bb
Init E (V) = 0.1
Final E (V) = 0.7
Incr E (V) = 0.008
Amplitude (V) = 0.025
Frequency (Hz) = 10
Sample Period (s) = 1
Quiet Time (s) = 2
Sensitivity (A/V) = 5e-4
— sb062_007bb
o sb062_012bb.bin

FIG. 17

Fig. 18







~~Fig. 6a~~ 20

FIG. 19